

Dosing of Antiretroviral Drugs in Adults with Renal Insufficiency and Hemodialysis / July 2006

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Several antiretroviral drugs are excreted primarily through the kidney and must be dose adjusted in the setting of renal insufficiency or hemodialysis. These tables summarize antiretroviral drug doses for patients with impaired renal function.

The nucleoside and nucleotide analogue reverse transcriptase inhibitors require dose adjustment in patients with renal insufficiency. Although there are little data on the pharmacokinetic properties of the nonnucleoside reverse transcriptase inhibitors and protease inhibitors in patients with renal insufficiency, the pharmacokinetic profiles of these drugs suggest a minimal effect of renal function on drug elimination.

Nucleoside/Nucleotide Analogues

Drug	Standard Dosage	Dosing in Renal Insufficiency and Hemodialysis			References
Abacavir	300 mg PO BID	Dose adjustment for renal insufficiency does not appear necessary			Ziagen package insert 9/05 see Reference number 1
Didanosine (enteric-coated capsules)	250 mg to 400 mg PO QD, depending on wt	CICr (mL/min)	Wt >=60 kg	Wt <60 kg	Videx EC package insert 10/05 see Reference numbers 2,3
		>=60	400 mg QD	250 mg QD	
		30-59	200 mg QD	125 mg QD	
		10-29	125 mg QD	125 mg QD	
		<10	125 mg QD	125 mg QD	
		HD	125 mg QD	125 mg QD	
Emtricitabine	200 mg PO QD	CICr (mL/min)			Emtriva package insert 9/05
		>=50	200 mg QD		
		30-49	200 mg Q 48 H		
		15-29	200 mg Q 72 H		
		<15	200 mg PO Q 96 H		
		HD	200 mg Q 96 H, give dose after dialysis		
Lamivudine	150 mg PO BID or 300 mg PO QD	CICr (mL/min)			EpiVir package insert 11/05 see Reference numbers 4,6
		>=50	150 mg BID or 300 mg QD		
		30-49	150 mg QD		
		15-29	150 mg first dose, then 100 mg QD		
		5-14	150 mg first dose, then 50 mg QD		
		<5	insufficient data, consider 150 mg first dose, then 25 mg QD		
Stavudine	20 mg to 40 mg PO BID, depending on wt	CICr (mL/min)	Wt >=60 kg	Wt <60 kg	Zerit package insert 9/05 see Reference number 7
		>50	40 mg BID	30 mg BID	
		26-50	20 mg BID	15 mg BID	
		10-25	20 mg QD	15 mg QD	
		HD	20 mg QD	15 mg QD	
Tenofovir	300 mg PO QD	Experience in patients with CICr <60 mL/min is limited. Preliminary data suggest:			Viread package insert 3/06 see Reference number 8
		CICr (mL/min)			
		>=50	300 mg QD		
		30-49	300 mg Q 48 H		
		10-29	300 mg twice weekly (ie, Q 3-4 days)		
		HD	300 mg QW		



≡ Nucleoside/Nucleotide Analogues *cont.*

Drug	Standard Dosage	Dosing in Renal Insufficiency and Hemodialysis	References	
Zidovudine	300 mg PO BID	CrCl (mL/min)	Retrovir package insert 9/05 see Reference numbers 9,10,11	
		<15		100 mg TID
		HD		100 mg TID
Fixed Dose Combinations				
Drug	Standard Dosage	Dosing in Renal Insufficiency and Hemodialysis	References	
Combivir (zidovudine/lamivudine)	1 tab PO BID	Substitute component drugs, dose adjusting each drug for CrCl	Combivir package insert 11/05	
Epzicom or Kivexa (abacavir/lamivudine)	1 tab PO QD	Substitute component drugs, dose adjusting each drug for CrCl	Epzicom package insert 11/05	
Trizivir (zidovudine/lamivudine/abacavir)	1 tab PO BID	Substitute component drugs, dose adjusting each drug for CrCl	Trizivir package insert 11/05	
Truvada (emtricitabine/tenofovir)	1 tab PO QD	CrCl (mL/min)	Truvada package insert 11/05	
		≥50		1 tab QD
		30-49		1 tab Q 48 H
		<30		Substitute component drugs, dose adjusting each drug for CrCl

Nonnucleoside Reverse Transcriptase Inhibitors

Drug	Standard Dosage	Dosing in Renal Insufficiency and Hemodialysis	References
Delavirdine	400 mg PO TID	Dose adjustment for renal insufficiency does not appear necessary	Rescriptor package insert 6/01
Efavirenz	600 mg PO QHS	Dose adjustment for renal insufficiency does not appear necessary	Sustiva package insert 4/05
Nevirapine	200 mg PO BID	Dose adjustment for renal insufficiency does not appear necessary	Viramune package insert 11/05 see Reference numbers 12,13,14

Protease Inhibitors

Drug	Standard Dosage	Dosing in Renal Insufficiency and Hemodialysis	References
Amprenavir	As of June 2005, no longer manufactured for adult dosing. Consider fosamprenavir.		
Atazanavir	400 mg PO QD, or 300 mg PO QD with ritonavir 100 mg PO QD	Dose adjustment for renal insufficiency does not appear necessary	Reyataz package insert 1/06
Darunavir	600 mg PO BID with ritonavir 100 mg PO BID	Dose adjustment for renal insufficiency does not appear necessary	Prezista package insert 7/06
Fosamprenavir	1,400 mg PO QD, or 1,400 mg PO QD with 200 mg ritonavir PO QD, or 700 mg PO BID with ritonavir 100 mg PO BID	Dose adjustment for renal insufficiency does not appear necessary	Lexiva package insert 11/05
Indinavir	800 mg PO Q 8 H	Dose adjustment for renal insufficiency does not appear necessary	Crixivan package insert 10/05 see Reference numbers 15,16
Lopinavir/Ritonavir	400 mg/100 mg (2 tablets) PO BID	Dose adjustment for renal insufficiency does not appear necessary	Kaletra package insert 10/05 see Reference numbers 17
Nelfinavir	1,250 mg PO BID	Dose adjustment for renal insufficiency does not appear necessary	Viracept package insert 10/05 see Reference numbers 14,18,19

Protease Inhibitors *cont.*

Drug	Standard Dosage	Dosing in Renal Insufficiency and Hemodialysis	References
Ritonavir	600 mg PO BID (as single PI) 100 mg or 200 mg (in combination with other PIs)	Dose adjustment for renal insufficiency does not appear necessary	Norvir package insert 1/05 <i>see Reference number 12</i>
Saquinavir (hard-gel capsules or tablets)	1,000 mg PO BID with 100 mg ritonavir PO BID (should not be used as sole PI; must be boosted with ritonavir)	Dose adjustment for renal insufficiency does not appear necessary	Invirase package insert 9/05; Norvir package insert 1/05 <i>see Reference number 20</i>
Tipranavir	500 mg PO BID with 200 mg ritonavir PO BID (should not be used as sole PI; must be boosted with ritonavir)	Dose adjustment for renal insufficiency does not appear necessary	Aptivus package insert 11/05

Fusion Inhibitors

Drug	Standard Dosage	Dosing in Renal Insufficiency and Hemodialysis	References
Enfuvirtide	90 mg SC BID	Dose adjustment for renal insufficiency does not appear necessary	Fuzeon package insert 4/05

List of abbreviations:	BID = 2 times per day CrCl = creatinine clearance H = hour(s)	HD = hemodialysis PO = orally Q = every	QD = daily QHS = at bedtime QW = once weekly	SC = subcutaneous (injection) TID = 3 times per day Wt = body weight
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